

AMENDMENTS TO THE CLAIMS

This Listing of Claims will replace all prior versions and listings of claims in this application.

1. (Canceled)

2. (Canceled)

3. (Previously Presented) The chemical conversion coating agent according to Claim 23,

wherein the water-soluble resin has a molecular weight of 500 to 500000, and a content of the water-soluble resin in the chemical conversion coating agent is 5 to 5000 ppm.

4. (Previously Presented) The chemical conversion coating agent according to Claim 23, containing

1 to 5000 ppm of at least one kind of a chemical conversion reaction accelerator selected from the group consisting of nitrite ion, nitro group-containing compounds, hydroxylamine sulfate, persulfate ion, sulfite ion, hyposulfite ion, peroxides, iron (III) ion, citric acid iron compounds, bromate ion, perchlorinate ion, chlorate ion, chlorite ion, as well as ascorbic acid, citric acid, tartaric acid, malonic acid, succinic acid and salts thereof.

5. (Previously Presented) The chemical conversion coating agent according to Claim 23,

wherein the at least one kind selected from the group consisting of zirconium, titanium and hafnium has a content of 20 to 10000 ppm in terms of metal, and the chemical conversion coating agent has a pH of 1.5 to 6.5.

6. (Withdrawn) A surface-treated metal comprising

a chemical conversion coat formed by the chemical conversion coating agent according to Claim 23.

7. (Withdrawn) The surface-treated metal according to Claim 6, wherein the chemical conversion coat has a coat amount of 0.1 to 500 mg/m² in a total amount of metals contained in the chemical conversion coating agent.

8. (Canceled)

9. (Canceled)

10. (Previously presented) The chemical conversion coating agent according to Claim 3, containing

1 to 5000 ppm of at least one kind of a chemical conversion reaction accelerator selected from the group consisting of nitrite ion, nitro group-containing compounds, hydroxylamine sulfate, persulfate ion, sulfite ion, hyposulfite ion, peroxides, iron (III) ion, citric acid iron compounds, bromate ion, perchlorinate ion, chlorate ion, chlorite ion, as well as ascorbic acid, citric acid, tartaric acid, malonic acid, succinic acid and salts thereof.

11. (Canceled)

12. (Canceled)

13. (Previously presented) The chemical conversion coating agent according to Claim 3,

wherein the at least one kind selected from the group consisting of zirconium, titanium and hafnium has a content of 20 to 10000 ppm in terms of metal, and the chemical conversion coating agent has a pH of 1.5 to 6.5.

14. (Previously presented) The chemical conversion coating agent according to Claim 4,

wherein the at least one kind selected from the group consisting of zirconium, titanium and hafnium has a content of 20 to 10000 ppm in terms of metal, and the chemical conversion coating agent has a pH of 1.5 to 6.5.

15. (Canceled)

16. (Withdrawn) A surface-treated metal comprising
a chemical conversion coat formed by the chemical conversion coating agent according to Claim 3.

17. (Withdrawn) A surface-treated metal comprising
a chemical conversion coat formed by the chemical conversion coating agent according to Claim 4.

18. (Withdrawn) A surface-treated metal comprising
a chemical conversion coat formed by the chemical conversion coating agent according to Claim 5.

19. (Canceled)

20. (Previously presented) The chemical conversion coating agent according to Claim 10,

wherein the at least one kind selected from the group consisting of zirconium, titanium and hafnium has a content of 20 to 10000 ppm in terms of metal, and the chemical conversion coating agent has a pH of 1.5 to 6.5.

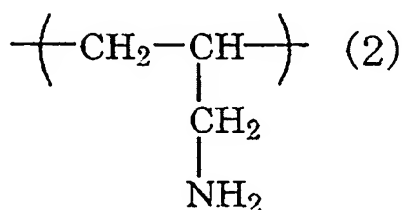
21-22. (Canceled)

23. (Currently Amended) A chemical conversion coating agent comprising:
at least one kind selected from the group consisting of zirconium, titanium and hafnium;

fluorine; and

a water-soluble resin ,

wherein said water-soluble resin is a polyallylamine which is a homopolymer having
has a constituent unit expressed by the chemical formula (2):



and

wherein the water-soluble resin is a polyallylamine resin.

24. (Previously Presented) The chemical conversion coating agent according to Claim 23 which is substantially free from phosphate ions.

25. (Previously Presented) The chemical conversion coating agent according to Claim 23 for manufacturing automobile bodies and parts.

26. (Previously Presented) The chemical conversion coating agent according to Claim 24 which comprises zirconium.

27. (Previously Presented) The chemical conversion coating agent according to Claim 24 for obtaining a chemical conversion coating film by rinsing with water after chemical conversion coating treatment.